Amendments to the Claims:

The listing of claims below replaces all previous versions of the claims in this application.

[c1] (Currently Amended) A method for seismic imaging of subsurface diffractors, comprising:

performing velocity analysis on a seismic time record section; ~~and~~

depth migrating the time section for offsets exceeding one-half a distance between a seismic energy source and a seismic receiver most distant from the source during acquisition of seismic data used to generate the time record section**; and**

determining a time gradient of the diffractors and attenuating spatial aliasing of specular reflective events in the depth migrated section using the time gradient.

[c2] (Original) The method of claim 1 wherein the depth migrating comprises Kirchoff migration.

[c3] (Canceled)

[c4] (Currently Amended) A method for seismic imaging of subsurface diffractors, comprising:

deploying a seismic energy source at a selected position near the Earth's surface;

deploying a plurality of seismic receivers at selected positions along the Earth's surface;

actuating the source at selected times;

recording signals detected by the receivers;

performing velocity analysis on a seismic time record section made from the recorded signals; ~~and~~

depth migrating the time section for offsets exceeding one-half a distance between the source and one of the receivers most distant from the source**; and**

determining a time gradient of the diffractors and attenuating spatial aliasing of specular reflective events in the depth migrated section using the time gradient.

[c5] (Currently Amended) The method of claim [[1]]**4** wherein the depth migrating comprises Kirchoff migration.

[c6] (Canceled)

[c7] (Currently Amended) A computer program stored in a computer readable medium, the program having logic operable to cause a programmable computer to perform steps comprising:

performing velocity analysis on a seismic time record section; ~~and~~

depth migrating the time section for offsets exceeding one-half a distance between a seismic energy source and a seismic receiver most distant from the source during acquisition of seismic data used to generate the time record section**; and**

determining a time gradient of the diffractors and attenuating spatial aliasing of specular reflective events in the depth migrated section using the time gradient.

[c8] (Original) The computer program of claim 8 wherein the depth migrating comprises Kirchoff migration.

[c9] (Canceled)